Mint of the United States at Philadelphia, Pa.,
Machine Shop
~~SUPERINTENDENT'S OFFICE,~~

April 3rd, 1889.

Hon Daniel M Fox.
Superintendent
Dear Sir.

I herewith enclose for your consideration a tabulated form, giving the result of an experimental rolling and cutting of Silver Dollar Ingots, without annealing or drawing.

The Table shows. First, five measurements of thickness of each planchet, and the average thickness as a result.
Second, The original weight of each planchet as cut from the rolled fillet.
Third. The weight after the recutting of each planchet by the means of a punch and bed, having a less diameter than the

original.

Fourth. The amount of reduction in weight by the re-cutting process on each planchet.

Fifth. The weights after re-cutting of such heavy planchets as would have been necessary to bring them within easy adjusting limits.

Sixth. The original weights of such planchets as were already within adjusting limits, without recutting.

From the several items as tabulated it would appear that ingots may be rolled to the finished thickness without annealing, and such heavy planchets as are found among those cut from the fillets, may by the recutting process be brought within adjusting limits and thus add a large proportion of planchets available for coin.

The saving by this method would be to the Coiner in the annealing and drawing of fillets. The cost of fuel, repairs to annealing furnaces, and the working of metal free from oxidation.

That the work may be properly done, and desirable results obtained, it would be necessary that Rolls with harder faces, and Cutting Presses of more rigid construction should be used.

That many planchets are reduced below the proper weight by the punching of planchets from annealed fillets, there can be no doubt, as the metal in the annealed fillet is drawn by the punch to the periphery of the planchet and removed by punching, leaving the edge thinner than the centre, this may vary with the condition of the annealed fillet, and the sharpness of the punch and bed.

You will observe that the average difference in thickness of the 77 planchets is about 1¼ thousandths of one inch, that this may be improved by good rolls and careful attention is probable.

My recent letter to you submitting design for hardened steel shell rolls, was intended as a means of supplying such a roll as would retain perfect truth of face for a considerable time.

Very Respectfully.
Saml James
Foreman

RG104 E-1 Box 157

958

Mint of the United States at Philadelphia, Pa.,

~~Superintendent's Office,~~

April 3 1889.

Saml. James.
Foreman, ~~Superintendent.~~

Sends Tabulated Statement giving result of an experimental rolling and cutting of Silver Dollar Ingots without annealing or drawing.

RECEIVED
APR 3 1889
U.S. MINT, PHILA.

No. of Enclosures.

NARA RG104, Entry 1, Box 157

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